

physically contacts the upper surface of the non-magnetic layer 104. Hard ferromagnetic layer 106 is deposited, using known and conventional means, so that the magnetic moment within that layer will have its preferred direction of orientation within the plane of the layer (i.e., not extending out of the layer toward adjacent layers of memory element 10).

Detailed Description Text - DETX (18):

The lower surface of non-magnetic layer 108 rests on and physically contacts the upper surface of hard ferromagnetic layer 106 and serves as the intervening, non-magnetic layer required for the spin-valve effect. The upper surface of non-magnetic layer 106 supports and physically contacts the soft ferromagnetic layer 110. Ferromagnetic layer 110 is deposited, using known and conventional means, so that the magnetic moments within that layer will have two preferred directions of orientation. These directions lie within the plane of the layer (i.e., they do not extend out of the layer toward adjacent layers of memory element 100). The bottom surface of layer 111 of conductive, non-magnetic material 112 rests upon and physically contacts the upper surface of ferromagnetic layer 110. The bottom surface of top conducting lead 112 also rests upon and physically contacts the upper surface of ferromagnetic layer 110 and physically contacts the upper surface of layer 111 of conducting,

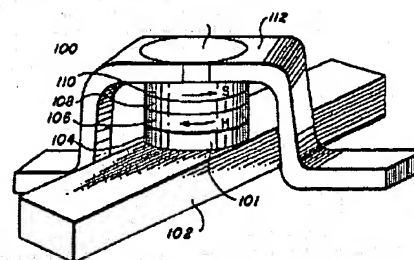


FIG. 4

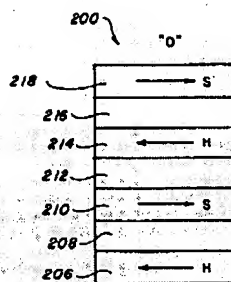


FIG. 5a

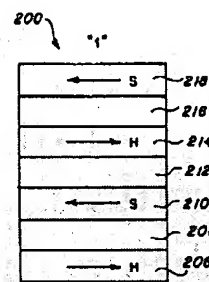


FIG. 5b